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AMERICAN BATS OF THE GENUS MIMON

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The large, leaf-nosed bat, *Mimon bennetti,* was described from South America in 1836. The species was erroneously included in the list of North American mammals by True (1885), and Miller (1907) gave its range as "South America north to southern Mexico." Subsequent check-lists retained this concept of the range of the species, although specimens of *Mimon* from Cozumel Island, Yucatan, Mexico, were described as a new species, *M. cozumelae,* in 1914. Other than the six specimens upon which the name *cozumelae* was based, no specimens of *Mimon* were reported from North America until 1941 when Sanborn recorded two specimens from the mainland of Yucatan, under the name *bennettii.*

Another *Mimon* was recorded from Yucatan by Hatt and Villa (1950). These authors pointed out that, on the basis of geographic probability, the Yucatan specimens recorded by Sanborn, as well as their own specimen, should be referable to *cozumelae* rather than *bennetti.* They compared the mainland specimens with four topotypes of *cozumelae* and found only minor differences.

Between 1946 and 1949 I obtained ten specimens of *Mimon* from central and southern Veracruz, Mexico. These specimens and four topotypes of *cozumelae* were kindly made available to me by Rollin H. Baker, of the University of Kansas Museum of Natural History. No essential differences were found between the two series. David H. Johnson, of the United States National Museum, generously loaned me what appears to be the only specimen of true *M. bennetti* in any North American museum. This bat, from Ypanema, Sao Paulo, Brazil (fixed as the type locality of *bennetti* by Hershkovitz, 1951) differs markedly from the Mexican specimens in a number of ways. The differences are not of such magnitude, however, as to preclude the possibility of intergradation should the range of *Mimon* be continuous from South America to Mexico. Nevertheless, there is now a gap in the known range of the genus that extends from Brazil to Mexico (George G. Goodwin, of the American Museum of Natural History, informs me that the alleged *Mimon* from Venezuela, in the American Museum, is actually a *Chrotopterus*). Until intergradation between the two forms is actually established, the most conservative treatment seems to be retention of both *M. bennetti* and *M. cozumelae* at full specific rank.

Mimon bennetti (Gray)

Phyllostoma bennetti Gray, Mag. Zool., Bot., 2, 1838:488.

Type locality.—South America. Fixed at Ypanema, Sao Paulo, Brazil, by Hershkovitz (1951).

Range.—Apparently known certainly only from Brazil.

Description.—A relatively small, very dark *Mimon*, with a distinct swelling, and posterior extension, of the occipital region of the skull. Large whitish areas are lacking at the bases of the ears. Measurements of a specimen from Ypanema are: total length, 79 mm.; length of tail, 14; length of hind foot, 15; height of ear from notch, 35; length of forearm, 52.6; greatest length of skull, 24.9; condylobasal length of skull, 22.2; length of upper tooth row (complete), 9.8; braincase breadth, 9.1; interorbital breadth, 4.8; mastoid breadth, 10.4; breadth across third upper molars, 9.4.

Mimon cozumelae Goldman

Mimon cozumelae Goldman, Proc. Biol. Soc. Washington, 27, 1914: 75.

Type locality.—Cozumel Island, Yucatan, Mexico.

Range.—Known only from the states of Yucatan and Veracruz, Mexico. Almost certainly present in Guatemala also, for specimens have been taken near the border of that country, in Veracruz.

Description.—Larger and paler in color than *Mimon bennetti*, with whitish areas at the bases of ears, and skull with much smaller swelling in occipital region. Mean measurements of ten adults from Veracruz, Mexico, are: total length, 90 mm.; length of tail, 20; length of hind foot, 16; height of ear from notch, 35; length of forearm, 54.9; greatest length of skull, 26.2; condylobasal length, 23.0; length of upper tooth row (complete), 10.2; braincase breadth, 10.1; interorbital breadth, 4.6; mastoid breadth, 11.9; breadth across third upper molars, 9.4.

The apparent gap between the ranges of *M. bennetti* and *M. cozumelae* includes all of northern South American and Central America. Specimens from this area are needed before the true relationships of the present nominal species can be understood. The following observations, based on ten of the twenty specimens known from North America, may be helpful to collectors working in areas where critical specimens might occur.

Museum specimens of *Chrotopterus* have been confused with *Mimon* but *Chrotopterus* is so much larger (total length about 120 mm., rather than 90 mm.) that it can scarcely be mistaken for *Mimon* in the field. *Mimon* is, however, so similar to *Phyllostomus discolor* in size, color and general appearance, that close scrutiny is required for identification. The two may most rapidly be separated by the shape of the tips of the ears: pointed in *Mimon* but rounded in *Phyllostomus*. *Phyllostomus discolor* and *Mimon* may be found side-by-side, in the same cave. *Mimon* is rarely seen in flight, but when seen can be identified by its silent, swooping flight and extremely long interfemoral membrane. The only specimen I shot in flight was at a grove of orange trees where the half-spoiled fruit hung on the trees. Several bats, presumably all *Mimon*, were seen about the oranges. They may have been eating the fruit, fermented juice, or insects stupified by the juice.

Mimon seems to be only moderately social. The smallest number ever seen in a cave was two; the greatest number four. Caves inhabited were all similar: deep, dark, damp holes in limestone cliffs where the

rock was everywhere covered with a film of moisture. Only *Mimon* and *Phyllostomus* were ever taken in such habitat. The feces of *Mimon* are a white liquid that leaves calcareous smears similar to the droppings of owls and other predacious birds. No traces of food were ever found in caves inhabited by *Mimon*, but the bats are presumably carnivorous.

In their caves the bats are alert and eye the light as a collector enters their retreat. Unless actually molested, however, they are not apt to take flight. On one occasion four bats clinging close together to the roof of a cave were all knocked down with a stick, one at a time, without the others taking flight. One of those knocked down escaped by swimming into a narrow crevice in the water-filled floor of the cave. The three taken included two *Mimon* and one *Phyllostomus*. When individuals of *Mimon* do fly, however, they remain extremely shy, retreating ahead of the collector as he approaches without permitting a shot.

The caves inhabited by *Mimon* were almost always below the level of the surface of the ground and often had small entrances. No traces of the bats were found until the actual chamber in which they were living was entered. It was sometimes necessary to persist in exploring all chambers of caves that appeared too damp to be suitable for bats, in order to discover *Mimon*.

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